

REMARKS

Formal Matters

Claims 1, 3, 24-29, and 31-41 are pending in the application. Claim 30 is newly canceled without prejudice to later prosecution. Claims 1, 28 and 29 are amended. Claims 36-41 are new. No new matter is added by the amendments.

Support for the amendments are found throughout the specification such as at, for example, page 4, lines 23-26; page 7, line 32 to page 8, line 6; Figure 1; page 20, line 26 to page 21, line 14; page 38, line 10 to page 52, line 29 (Examples 1 - 3). No new matter is added by the amendments.

Specification

The amendment filed February 27, 2003 amended the priority claim to add US Application Serial No. 09/648,183, which is proper under 37 CFR § 1.78(a)(2)(B) because the instant application was filed before November 29, 2000. The amended priority claim also incorporated the added application by reference. The instant application is a continuation of the parent application and adds no new matter. The Examiner is respectfully requested to withdraw the objection to the specification.

Claims

Withdrawal of Objections/Rejections

Applicants gratefully acknowledge withdrawal of the rejection of claims 1, 3, 24-35 under Section 112, second paragraph.

Rejections Maintained:

Rejection Under 35 U.S.C. § 112, First Paragraph

The rejection of claims 1, 3, 24-35 under Section 112, first paragraph was maintained with respect to detection of a nucleic acid having at least 20 bases of SEQ ID NO:1 or 2. Claim

30 has been canceled without prejudice to later prosecution. Applicants respectfully traverse the rejection as applied and as it might be applied to the currently pending claims for the reasons provided below.

Applicants claim a method of screening for higher expression level of a nucleic acid sequence encoding SEQ ID NO:3 in tumor tissue. Using Applicants' specification as a guide, one of ordinary skill in the art can readily determine how and what sequences are useful to detect a nucleic acid encoding SEQ ID NO:3 in a tissue cell of a mammal. Methods of detecting are disclosed throughout the specification such as at page 20, line 26 to page 21, line 14 and page 38, line 10 to page 52, line 29 (Examples 1 - 3). Thus, the claimed subject matter is described in the specification in such a way as to reasonably convey to one of ordinary skill in the art that the inventors had possession of the invention at the time of filing. Withdrawal of the rejection under Section 112, first paragraph and allowance of the claims is respectfully requested.

Rejection Under 35 U.S.C. § 112, First Paragraph

The rejection of claims 1, 3, 24-35 under Section 112, first paragraph was maintained with respect to hybridization methods using nucleic acid probes having at least 20 bases of SEQ ID NO:1 or 2. Claim 30 has been canceled without prejudice to later prosecution. Applicants respectfully traverse the rejection as applied and as it might be applied to the currently pending claims for the reasons provided below.

Applicants' statements, above, are applicable to the present rejection. Applicants claim a method of screening for higher expression level of a nucleic acid sequence encoding SEQ ID NO:3 in tumor tissue. Using Applicants' specification as a guide, one of ordinary skill in the art can readily determine how and what sequences are useful to detect a nucleic acid encoding SEQ ID NO:3 in a tissue cell of a mammal. Methods of detecting are disclosed throughout the specification such as at page 20, line 26 to page 21, line 14 and page 38, line 10 to page 52, line 29 (Examples 1 - 3). Thus, the claimed subject matter is described in the specification in such a way as to reasonably convey to one of ordinary skill in the art that the inventors had possession

of the invention at the time of filing. Withdrawal of the rejection under Section 112, first paragraph and allowance of the claims is respectfully requested.

Rejection Under 35 U.S.C. § 112, First Paragraph

The rejection of claims 29 and 30 under Section 112, first paragraph was maintained with respect to marker sequences. Claim 30 has been canceled without prejudice to later prosecution. Applicants respectfully traverse the rejection as applied and as it might be applied to the currently pending claims for the reasons provided below.

Applicants' statements, above, are applicable to the present rejection. Applicants claim a method of screening for higher expression level of a nucleic acid sequence encoding SEQ ID NO:3 in tumor tissue. Using Applicants' specification as a guide, one of ordinary skill in the art can readily determine how and what sequences are useful to detect a nucleic acid encoding SEQ ID NO:3 in a tissue cell of a mammal. Methods of detecting are disclosed throughout the specification such as at page 20, line 26 to page 21, line 14 and page 38, line 10 to page 52, line 29 (Examples 1 - 3).

The Chromosome 16 map positions disclosed by Applicants provide regions from which one of ordinary skill in the art is guided to obtain sequences for detecting nucleic acid expression level at different regions along the chromosome as indicated by Chromosome 16 map regions P7, P55, P89, P90, P92, P93, P94, P95, P99, P154, and P208 recited in claim 29.

Thus, the claimed subject matter is described in the specification in such a way as to reasonably convey to one of ordinary skill in the art that the inventors had possession of the invention at the time of filing. Withdrawal of the rejection under Section 112, first paragraph and allowance of the claims is respectfully requested.

Rejection Under 35 U.S.C. § 112, First Paragraph

The rejection of claim 30 under Section 112, first paragraph was maintained with respect to SHGC marker sequences. Claim 30 has been canceled without prejudice to later prosecution,

rendering moot its rejection. Applicants respectfully traverse the rejection as applied and as it might be applied to the currently pending claims for the reasons provided below.

Applicants noted in the response filed February 27, 2003 that the SHGC markers recited in claim 30 are associated with publicly available accession numbers and sequences. The sequences were publicly available at the time the present application was filed. Any sequence amendments subsequent to submission of the sequence would be noted in the public record. As a result, the sequence available at the time of filing is readily determined. As a result, the rejection should be withdrawn. Nevertheless, without acquiescing to the Examiner's rejection and merely to advance prosecution, Applicants have canceled claim 30, rendering moot its rejection under Section 112, first paragraph. Withdrawal of the rejection is respectfully requested.

New Grounds for Rejection:

Priority Claim

With respect to priority, Applicants respectfully note that the pending recite a method of detecting expression level of a nucleic acid sequence encoding SEQ ID NO:3 in a tumor tissue of a mammal.

Rejection Under 35 U.S.C. § 102(a) (Joho et al. WO98/22507)

Claims 1, 3, and 24-27 are rejected under Section 102(a) as allegedly anticipated by Joho et al. (WO 98/22507). Applicants respectfully traverse the rejection as applied and as it might be applied to the currently pending claims for the reasons provided below.

The Joho et al. reference discloses the isolation and purification of nucleic acid molecules encoding a receptor tyrosine kinases, including LMR2, and methods of using the nucleic acid molecules, such as determining the expression patterns and levels for the genes.

Applicants disclose a method of screening for higher expression level of a nucleic acid sequence encoding SEQ ID NO:3 in tumor tissue in a mammal. SEQ ID NO:3 in turn encodes human cardiotrophin-1 and not LMR2. Thus, Applicants' claims 1, 3, and 24-27 are not

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anticipated by Joho et al. Withdrawal of the rejection and allowance of the claims is respectfully requested.

SUMMARY

Claims 1, 3, 24-29 and 31-41 are pending in the application. Claim 30 is newly canceled, rendering moot its rejection under Section 112, first paragraph. Claims 1, 28 and 29 are amended. Claims 36-41 are new.

The rejections under Section 112, first paragraph and 102(a) having been overcome, withdrawal of the rejections and allowance of the claims is respectfully requested.

If in the opinion of the Examiner, a **telephone conference** would expedite the prosecution of the subject application, the Examiner is **strongly encouraged** to call the undersigned at the number indicated below.

This response/amendment is submitted with a transmittal letter and petition for a three-month extension of time and fees. In the unlikely event that this document is separated from the transmittal letter, applicants petition the Commissioner to authorize charging our Deposit Account 07-0630 for any fees required or credits due and any extensions of time necessary to maintain the pendency of this application.

Respectfully submitted,

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By:


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